Twin Dual-Control Pentodes

9-PIN MINIATURE TYPE

COMMON-CATHODE, GRID No.1 & GRID No.2 DARK HEATER

For Combined Color Demodulator and Matrix Amplifier Applications in Color TV Receivers Having High-Level Demodulation Systems

ELECTRICAL CHARACTERISTICS

Bogey Values

Heater Voltage, AC or DC	E_f	6.3	V
Heater Current	I_f	760	mA
Direct Interelectrode Capacitances			
Without external shield			
G3 to P (each unit, with other unit connected to ground)	c_{g3-p}	2.7	pF
G1 to (K, P_{P2}, P_{P1}, $G3_{P2}$, $G3_{P1}$, G2, H)	c_{g1-all}	15.5	pF
$G3_{P1}$ to (K, P_{P2}, P_{P1}, $G3_{P2}$, G2, G1, H); $G3_{P2}$ to (K, P_{P2}, P_{P1}, $G3_{P1}$, G2, G1, H)	c_{g3-all}	6.0	pF
P_{P1} to (K, P_{P2}, $G3_{P2}$, $G3_{P1}$, G2, G1, H); P_{P2} to (K, P_{P1}, $G3_{P2}$, $G3_{P1}$, G2, G1, H)	c_{p-all}	3.7	pF
$G3_{P1}$ to $G3_{P2}$	c_{g3-g3}	0.10	pF

For the following characteristics, with both units operating, see Conditions

Plate Resistance, Approx., each unit	r_p	50000	Ω
Grid-No.1-to-Plate Transconductance, Each unit	$g_{m(g1p)}$	5800	µmhos
Grid-No.3-to-Plate Transconductance, Each unit	$g_{m(g3p)}$	350	µmhos
DC Plate Current, Each unit	I_b	7.6	mA
DC Grid-No.2 Current[a]	I_{c2}	14.5	mA
Cutoff DC Grid-No.1 Voltage, Approx., each unit, For I_b = 100 µA	$E_{c1(co)}$	-6.3	V
Cutoff DC Grid-No.3 Voltage[b], Approx., each unit, For I_b = 100 µA	$E_{c3(co)}$	-16.5	V

Conditions

Heater Voltage	E_f	6.3	V
DC Plate Voltage, Each unit	E_b	100	V
DC Grid-No.3 (Control-Grid) Voltage, Each unit	E_{c3}	0	V
DC Grid-No.2 (Screen-Grid) Voltage	E_{c2}	100	V
DC Grid-No.1 (Control-Grid) Voltage	E_{c1}	-2.5	V

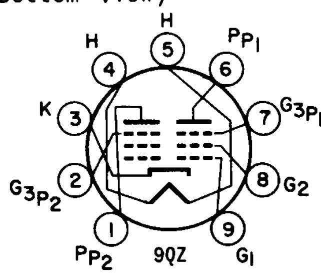
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MECHANICAL CHARACTERISTICS

Operating Position. . . . . Any
Type of Cathode . . . . Coated Unipotential
Maximum Overall Length. . . . . 3-1/16 in
Maximum Seated Length . . . . 3-13/16 in
Length, Base Seat to Bulb Top . . . . 2-7/16 ± 3/32 in
Excluding tip
Diameter. . . . . 0.750 to 0.875 in
Envelope. . . . . .JEDEC T6-1/2
Dimensional Outline (JEDEC 6-4) . . . . . See *General Section*
Base. . . . . Small-Button Noval 9-Pin (JEDEC E9-1)

TERMINAL DIAGRAM (Bottom View)

Pin 1 – Plate of Unit No.2
Pin 2 – Grid No.3 of Unit No.2
Pin 3 – Cathode
Pin 4 – Heater
Pin 5 – Heater
Pin 6 – Plate of Unit No.1
Pin 7 – Grid No.3 of Unit No.1
Pin 8 – Grid No.2
Pin 9 – Grid No.1

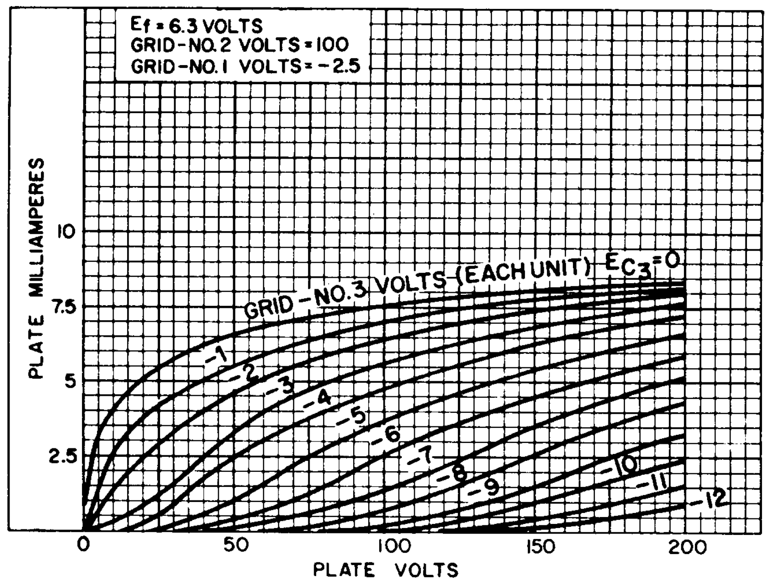


DESIGN MAXIMUM RATINGS

DC Plate Voltage (Each unit).	E_b	300	V
DC Grid-No.2 Voltage.	E_{c2}	150	V
Heater-Cathode Voltage			
Peak.	e_{hkm}	+200	V
		-300	V
Average[c].	$E_{hk(av)}$	100	V
Heater Voltage, AC or DC.	E_f	5.7 to 6.9	V
Grid-No.2 Input	P_{g2}	2	W
Plate Dissipation (Each unit)	P_b	2	W

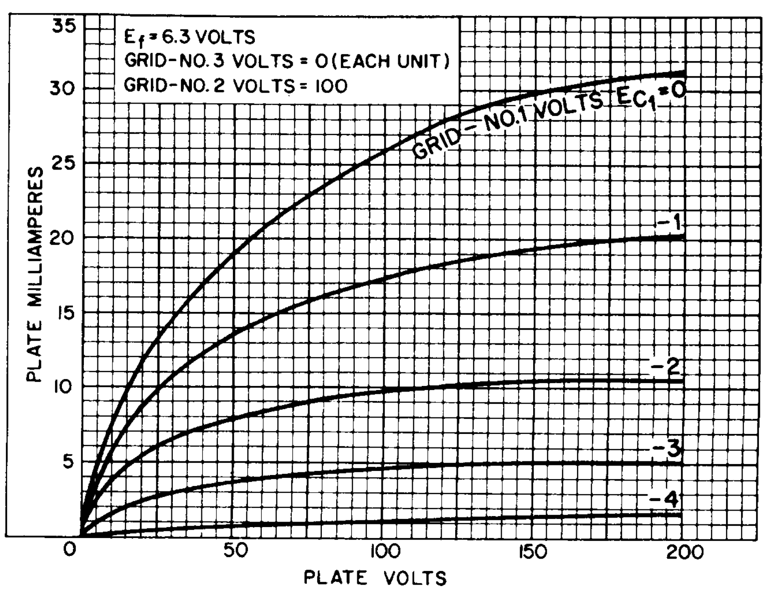
[a] Units in parallel (P_{p1} connected to P_{p2}; G_{3p1} connected to G_{3p2}).
[b] For this test, E_{c1} = -3 V so that the Grid-No.2 Input rating will not be exceeded.
[c] Measured with a dc meter.

Typical Plate Characteristics
Each Unit, with Both Units Operating



92CS-13459

Typical Plate Characteristics
Each Unit, with Both Units Operating



92CS-13460